Simultaneous Stabilisation Of Power Systems Using Geneticalgorithms

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Summary

The paper considers the simultaneous stabilisation of a power system over a wide range of operating conditions via a single power system stabiliser using genetic algorithms. A power system operating at various load levels is treated as a finite set of plants. The problem of selecting the parameters of a power system stabiliser which simultaneously stabilises this set of plants is converted to a simple optimisation problem which is solved by a genetic algorithm and an eigenvalue-based objective function. A single-machine infinite bus system is considered to demonstrate the suggested technique